

REMARKS

This application is a continuation application of Serial No. 09/757,783, which application was a divisional application of Serial No. 09/302,215, now U.S. Patent No. 6,226,854 which claims the die member. The method claims were rejected by the Examiner as unpatentable over U.S. Patent No. 4,484,385 assigned to the predecessor in interest of this application. As set forth in the Background of the Invention of this application, pierce and clinch nuts of the type disclosed herein are installed in a die press including a die member or die button having parallel clinching lips as disclosed, for example, in U.S. Patent Nos. 4,484,385 and 4,630,363, both assigned to the predecessor in interest of the assignee of this application. However, the die member is subject to failure which requires the press to be shut down and lost production time. Further, the panel metal does not completely fill the nut grooves, particularly adjacent the open ends of the grooves, resulting in a reduction in the potential push-off strength. These problems have been reduced by the die member and method of attaching a fastener of this invention, wherein the width of the clinching lips of the die button adjacent there opposed ends is less than the width of the clinching lips at the mid-portion. Thus, as the clinching lips are driven against the panel and the panel is driven against the bottom wall of the fastener grooves, the panel is simultaneously driven longitudinally toward the end portions of the clinching lips and the open ends of the grooves, significantly reducing breakage of the clinching lips and resulting in an improved fastener and panel installation.

As set forth in the specification of this application, page 8, this results in a significant reduction on the stress applied to the clinching lips, wherein the stress is reduced from about 150,000 psi to about 31,600 psi.

New Claim 24 and amended Claim 14 now specifically recite that the mid-portion of the clinching lips has a greater width than the end portions and the method includes driving the clinching lips against the panel in the bottom wall of the fastener grooves and simultaneously toward the open ends of the grooves, where the width of the clinching lips is reduced, which is not disclosed or suggested in the prior art, particularly including U.S. Patent No. 4,484,385 relied upon by the Examiner in his rejection of the method claims in the parent application. Contrary to the assertion by the Examiner, the panel portions deformed against the bottom wall of the groove by the clinching lips are *not deformed longitudinally* because the clinching lips have a constant width resulting in the extreme stresses as described above. There is simply no support in the '385 patent for the Examiner's position that the clinching lips 60 will deform panel metal longitudinally toward the open ends of the nut grooves or deform the panel metal laterally at the open ends of the nut grooves.

For the reasons set forth above, the Applicant respectfully submits that the claims now presented for examination patentably define over the prior art.

Respectfully submitted,

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Preliminary Amendment

CERTIFICATE OF EXPRESS MAILING

I hereby certify that the enclosed **Preliminary Amendment** is being deposited with the United States Postal Service as Express Mail, postage prepaid, in an envelope as "Express Mail Post Office to Addressee," Mailing Label No. **EV353257046US** and addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **July 25, 2003**.



Tracy L. Smith

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